|  | <br>Claims |    |
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|  |            | Y. |

| Application No. | Applicant(s) |
|-----------------|--------------|
| 10/002,857      | CHANG ET AL. |
| Examiner        | Art Unit     |

Quan-Zhen Wang

Rejected - (Through numeral)
Cancelled

÷ Restricted

Non-Elected

I Interference

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O Objected

2633

| The color of the | Cla      | aim      | Date     |              |              |                  |          |          |          |              | Claim Date |        |       |          |          |                 |          |          | 7        | Γ        | Cla                     | im  | Date         |          |                   |          |          |               |   |          |          |          |          |          |          |
|--|----------|----------|----------|--------------|--------------|------------------|----------|----------|----------|--------------|------------|--------|-------|----------|----------|-----------------|----------|----------|----------|----------|-------------------------|-----|--------------|----------|-------------------|----------|----------|---------------|---|----------|----------|----------|----------|----------|----------|
| 1   V  | -        |          | _        | T            | Π            | Π                |          |          |          | П            |            | -<br>- |       |          |          |                 | T        | Ť        | Ť        | $\neg$   | Т                       | ··T | ┥.           | H        |                   |          |          |               | Т   | Ť        | T        |          | -        | $\neg$   | ┈┤       |
| 1   V  | Final    | Original | 11/8/04  |              |              |                  |          |          |          |              |            |        | Final | Original |          |                 |          |          |          |          |                         |     |              |          | Final             | Original |          |               |   |          |          |          |          |          |          |
| 2  |          |          | J        | -            | ┝            |                  |          | _        | -        | H            |            | ١.     |       |          | -        | $\dashv$        |          | $\dashv$ | +        | +        | +                       | -   | +            | $\vdash$ |                   |          | $\dashv$ | +             | +   | +        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ |
| 3   V   53   103   104   105   105   105   105   105   105   105   105   105   106   107   107   107   107   107   107   107   107   107   107   107   107   107   107   107   107   107   108   108   109 |          |          | _        | H            | -            | <del>  -  </del> | $\vdash$ | -        | $\vdash$ | Н            |            |        |       |          | -        | -               | -        |          | -        | $\dashv$ | $\dashv$                | +   | ┥            | H        |                   |          | $\dashv$ | +             | +   | $\dashv$ | $\dashv$ | $\dashv$ |          | $\dashv$ | ᅱ        |
| A   V   S   S   S   S   S   S   S   S   S  |          |          |          | -            | <del> </del> |                  |          | -        | ┝        | $\vdash$     |            |        |       |          | -        |                 | -        | +        | -+       | +        | $\dashv$                | +   | -            | $\vdash$ |                   |          | -        |               | +   | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | ᅱ        |
| 5  |          |          | _        | ┝            | ├            | -                | -        | -        |          | H            |            |        |       |          |          | -               | -        | -+       | +        | $\dashv$ | +                       | +   | ┨ `          | -        |                   |          | -        |               | +   | $\dashv$ | -        | $\dashv$ | -        |          | $\dashv$ |
| 6  |          |          |          | ┢            | -            | -                |          |          |          |              |            |        |       |          |          | -               | $\dashv$ | $\dashv$ | +        | +        | -+                      |     | ┨            | ╌┝       |                   |          | $\dashv$ | +             | +   | $\dashv$ | -        |          |          |          | $\dashv$ |
| T  |          |          | _        | ┝            | ┢            |                  | $\vdash$ |          | $\vdash$ | H            |            |        |       |          | -        | -               | -        | -+       |          | +        | +                       | +   | <b>-</b>  ., | ŀ        |                   |          |          | -             | +   | $\dashv$ | $\dashv$ | $\dashv$ | -        |          |          |
| 8  |          |          |          | -            | ├            | ⊢                | _        | _        | H        | Н            |            | ,      |       |          | -        | $\dashv$        |          |          |          | +        | +                       | +   | -            | ┝        |                   | 100      | -        | $\dashv$      | +   | $\dashv$ | -        | -        | -        |          | $\dashv$ |
| 9  |          |          | _        |              | ├            | ┢                |          | _        | $\vdash$ | Н            |            |        |       |          | -        | -               | -        | -+       | -+       | $\dashv$ | +                       | +   | -            | -        |                   |          |          | -             | +   | $\dashv$ | -        | -        |          | $\dashv$ | $\dashv$ |
| 10   |          |          |          | ├            | <u> </u>     | H                | H        | -        | -        | -            |            |        |       | 58       |          | $\dashv$        | $\dashv$ | _        |          | +        | ┵                       |     |              | ╌        |                   |          | $\dashv$ | -             | +   | $\dashv$ | $\dashv$ | -        |          |          |          |
| 10   |          |          | ľ        | $\vdash$     | ⊢            | ┢                | H        | _        | -        | $\vdash$     |            | hr i   | -     |          |          | $\dashv$        | -        |          | -        | +        | $\dashv$                |     | - :          | ŀ        |                   |          | $\dashv$ | -             | +   | $\dashv$ | -        |          |          |          |          |
| 12   | <u> </u> |          | ⊢        | ⊢            | ┢            |                  |          | _        | <u> </u> | _            |            |        |       |          |          | -               | $\dashv$ |          | -+       | -        | +                       |     | -   "        | ŀ        |                   |          | _        | _             | +   | $\dashv$ | _        | -        | -        |          | _        |
| 12   |          |          |          | ⊢            | ├-           |                  |          |          |          |              |            |        |       |          | Н        |                 | $\dashv$ | -        | +        | +        | +                       | +   | -  ∴         | ŀ        | $\longrightarrow$ |          |          |               | +   | $\dashv$ | _        | $\dashv$ | _        |          | _        |
| 14   | <u> </u> |          | -        | 1            | <del> </del> | H                | $\vdash$ | H        |          | $\vdash$     |            | 1.1    |       |          | $\vdash$ | $\vdash \vdash$ | -        | -        | +        | +        | +                       | +   | ┨ .          | -        |                   |          |          | +             | +   | $\dashv$ | $\dashv$ | $\dashv$ |          | $\dashv$ | $\dashv$ |
| 15   |          |          | $\vdash$ | $\vdash$     | $\vdash$     | ├-               |          | -        | -        | $\vdash$     |            |        |       |          | H        | H               | _        |          |          | -        | -                       | -   | -            | F        |                   |          | $\dashv$ | +             | +   | $\dashv$ | $\dashv$ |          | -        |          | _        |
| 16         17         66         116         117         118         117         118         117         118         118         118         118         118         118         118         119         120         119         120         119         120         120         121         121         121         121         121         122         23         123         123         123         123         123         123         124         124         124         125         26         74         125         26         75         126         77         127         28         78         128         29         79         129         30         130         33         133         34         131         33         34         34         34         34         34         34         34         34         34         34         34         34         34         34         34         34         35         36 <td< td=""><td></td><td></td><td>├—</td><td><math>\vdash</math></td><td><math>\vdash</math></td><td><math>\vdash</math></td><td><math>\vdash</math></td><td>-</td><td>├</td><td>-</td><td></td><td></td><td></td><td></td><td><math>\vdash</math></td><td><math>\vdash</math></td><td>-</td><td>_</td><td>-</td><td>+</td><td>+</td><td></td><td>١,</td><td>-</td><td></td><td></td><td><math>\dashv</math></td><td>+</td><td>+</td><td><math>\dashv</math></td><td>-</td><td>_</td><td><math>\dashv</math></td><td></td><td></td></td<>  |          |          | ├—       | $\vdash$     | $\vdash$     | $\vdash$         | $\vdash$ | -        | ├        | -            |            |        |       |          | $\vdash$ | $\vdash$        | -        | _        | -        | +        | +                       |     | ١,           | -        |                   |          | $\dashv$ | +             | +   | $\dashv$ | -        | _        | $\dashv$ |          |          |
| 17         18         67         117         118         118         118         118         118         119         119         119         119         120         120         120         121         121         122         121         121         122         123         123         123         123         123         124         124         124         124         125         125         126         126         126         126         127         127         127         127         127         127         128         128         128         128         129         130         130         131         130         131         130         131         131         132         132         132         132         132         132         132         132         132         133         134         135         136         136         136         136         136         136         136   | <u> </u> |          | $\vdash$ |              | -            | <b> </b>         |          | <u> </u> | -        | $\vdash$     |            | , ···  |       |          | $\vdash$ | $\vdash \vdash$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$                |     | 4            | ŀ        |                   |          | _        | _             | +   | 4        | 4        | 4        | -        | $\dashv$ | $\dashv$ |
| 17   |          |          | -        | ļ.           | -            | <u> </u>         | _        |          |          | Н            |            | 1.     |       |          |          |                 |          | -        | _        | -        | -                       | -   | 43           | ŀ        |                   |          | _        | $\dashv$      | 4   | $\dashv$ | -        |          | -        |          | _        |
| 19   |          |          | _        |              | <u> </u>     | H                | <u> </u> | _        | -        | _            |            | -      |       |          |          |                 | 4        | _        | 4        | 4        | +                       |     | 4            | -        |                   |          |          | $\dashv$      | 4   | $\dashv$ | -        | _        | _        | $\dashv$ | _        |
| 120  |          |          | _        | ऻ_           | <u> </u>     | <u> </u>         | <u> </u> | _        |          | Ш            |            | 341    |       |          |          |                 | _        |          |          | _        | 4                       |     | 4            | L        |                   |          | _        |               | 4   | 4        | 4        | 4        | _        | _        | _        |
| 21         71         72         121         122         123         123         123         123         123         123         123         124         124         124         124         124         124         124         124         125         125         125         125         126         126         126         127         127         127         127         127         127         128         128         128         128         129         130         131         132         133         133         133         133         133         133         133         133         133         133         133         134         135         135         135         135         135         135         136         137         137   |          |          | <u> </u> | _            | $\vdash$     |                  |          |          | _        |              |            |        |       | 69       | Щ        |                 | _        | _        | _        | _        | 4                       |     | 4            | Ĺ        |                   |          | _        | _             | 4   | _        | _        | _        | _        | $\dashv$ | _        |
| 122  | <u> </u> |          | <u> </u> | <u> </u>     | L            | ļ                | _        |          |          |              |            |        |       |          | Щ        |                 | $\perp$  |          | _        | 4        | 4                       |     |              |          |                   |          |          |               | 4   | 4        | _        | _        | _        | _        |          |
| 23         73         74         123         124         124         124         124         124         125         126         125         125         125         126         126         127         127         128         127         127         128         129         129         129         130         130         130         131         131         131         131         131         131         132         133         134         134         134         134         134         134         134         134         134         134         134         134         134         134         134         136         137         136         137         137         138         138         138         138         138         138         138         139         144         144         144         144         144         144         144         144         144         144         144         144         144         144   |          |          | _        | <u> </u>     | <u> </u>     | L                | _        |          |          |              |            |        |       |          |          |                 |          |          |          | 4        | 4                       |     | 4            | L        |                   | 121      |          |               | 4   | 4        | _        | _        | _        | _        | Щ        |
| 24         74         124         125         125         125         126         126         126         126         126         126         127         127         127         127         127         128         129         129         129         129         129         130         130         130         130         130         130         130         130         130         131         131         131         131         132         132         132         132         133         133         133         133         133         134         134         134         134         134         134         134         134         134         135         135         135         135         135         136         136         137         137         137         138         138         138         138         138         138         138         139         140         140         140         140         141         142         142         142         142         143         143         144         144         144         144         145         146         146         146         146         146         146         146         146         146  |          |          | ┖        | L            |              |                  |          |          | _        | Ш            |            |        |       |          |          |                 | _        | _        |          | _        | _                       |     | 1            | L        |                   |          | _        |               | 4   | _        | _        | _        | _        | _        | _        |
| 25         75         125         126         126         126         126         127         126         127         127         128         128         128         128         129         129         129         130         130         130         131         131         131         131         132         132         132         132         133         133         133         133         133         133         134         134         134         134         134         135         135         136         136         137         136         137         138         138         138         138         139         140         140         140         141         141         141         142         142         142         142         142         142         143         144         144         144         145         145         146         146         147         147         148         148         148         149  | <u> </u> |          | L        | ļ            | L            | _                | _        |          |          |              |            |        |       |          |          |                 | _        | _        | _        | _        | 4                       |     | 4            | L        |                   |          | _        |               | 4   | 4        | _        | _        | _        | _        | Ц        |
| 26         76         126           27         127         127           28         78         128           29         79         129           30         80         130           31         81         131           32         82         132           33         83         133           34         84         134           35         85         135           36         86         136           37         88         138           39         89         139           40         90         140           41         91         141           42         92         142           43         93         143           44         94         144           45         96         146           47         97         147           48         98         149   |          |          | _        | L            | ļ            | L                |          | _        |          |              |            |        |       |          |          |                 | _        |          |          | _        | $\perp$                 |     | _            | L        |                   |          |          |               | _   | _        | _        |          | _        | _        | _        |
| 127  | Ш        |          |          |              | ╙            |                  |          |          |          |              |            |        |       |          |          |                 | _        |          | _        | _        | _                       |     | ╛            | L        |                   | 125      |          |               | 1   | _        |          |          | _        |          |          |
| 28       78       128         29       79       129         30       80       130         31       81       131         32       82       132         33       83       133         34       84       134         35       85       135         36       86       136         37       87       137         38       88       138         39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       149  | Щ        |          | _        | _            | _            | L                |          |          |          | Щ            |            |        |       |          |          |                 | _        | _        | _        | _        | _                       |     | _  ⊤         | L        |                   |          | _        |               | _   | $\perp$  | _        |          |          |          | 凵        |
| 29     79       30     130       31     81       32     83       33     84       35     85       36     86       37     87       38     88       39     89       40     90       41     91       42     92       43     93       44     94       45     96       46     96       47     97       48     98       99     146       47     97       48     98       99     149   |          |          | L.       | _            | <u> </u>     |                  |          |          |          | Ш            |            |        |       |          |          |                 | _        | _        |          | _        |                         |     | _            | L        |                   | 127      | $\Box$   | $\perp$       | $\perp$   | $\dashv$ | _        |          | _        |          | _        |
| 30   |          |          | ┖        | ╙            | <u> </u>     |                  | _        | _        | _        |              |            | ]      |       |          | Ш        |                 | _        | _        | _        | $\perp$  | _                       |     | ╛            | Ł        |                   | 128      |          |               | $\perp$   |          |          |          |          | $\Box$   | _        |
| 31         81         131         132         132         133         133         133         133         133         133         134         134         134         134         135         135         135         135         135         136         136         137         137         137         137         137         138         138         138         138         138         139         139         140         140         140         141         141         141         141         141         141         142         142         142         143         143         144         144         144         144         144         144         144         144         144         144         144         145         146         146         147         147         147         148         148         149  |          |          | L        | <u> </u>     |              |                  |          |          |          |              |            |        |       |          |          |                 | _        | _        |          | _        | _                       | Щ.  | ۱.,          | L        |                   |          |          |               | $\perp$   | $\perp$  |          |          | $\perp$  | _        |          |
| 32     82       33     132       34     133       35     85       36     86       37     88       39     89       40     90       41     91       42     92       43     93       44     94       45     96       46     96       47     97       48     98       49     149   |          |          | <u></u>  | L            | <u> </u>     | _                | _        |          |          | Ш            |            |        |       |          |          |                 |          | $\perp$  |          |          | _                       |     |              | L        |                   |          |          |               | $\perp$   | $\perp$  |          |          |          |          |          |
| 33       83       133       134         34       84       134       134         35       85       135       135         36       86       136       137         38       87       138       137         39       88       139       139         40       90       140       141         41       91       141       141         42       92       142       142         43       93       143       144         44       94       144       144         45       95       145       146         47       97       147       148         48       98       148       149  |          |          |          | L            |              |                  |          |          |          | Ш            |            |        |       |          |          |                 |          |          |          |          |                         |     | ╛            | L        |                   |          |          |               | $\perp$   |          |          |          |          |          |          |
| 34     84       35     85       36     86       37     87       38     88       39     89       40     90       41     91       42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     149   |          |          | L        | L            | _            |                  |          |          |          | Ш            |            |        |       |          |          |                 |          |          |          | $\perp$  |                         |     | ١٠.          | L        |                   |          |          |               |   |          |          |          |          |          |          |
| 35     85       36     86       37     87       38     88       39     89       40     90       41     91       42     92       43     93       44     94       45     96       46     96       47     97       48     98       49     149   |          |          | <u> </u> | 丄            | <u> </u>     | L.               | Ш        |          | Ш        | Ш            |            |        |       |          | $\Box$   |                 | _[       |          |          |          | $\perp$                 |     | 1.           | L        |                   |          |          |               |   |          |          |          |          |          | ]        |
| 36       86       136         37       87       137         38       88       138         39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |          |          | <u> </u> | $oxed{oxed}$ |              | Ш                | _        | L_       | _        |              |            |        |       |          |          |                 |          |          |          | [        | $\perp$                 |     | _            | L        | I                 |          |          | $\perp$       | $\perp$   | $\perp$  | $\Box$   | [        |          |          |          |
| 37     88       38     88       39     89       40     90       41     91       42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     149       137     138       139     139       140     141       141     142       143     143       144     144       145     146       147     148       149     149   |          |          | <u> </u> | $oxed{oxed}$ | _            |                  | Щ        |          |          | Ш            |            |        |       |          | Ш        |                 |          |          | $\perp$  | $\Box$   |                         |     | _ ՝          | L        |                   |          |          |               |   | $\perp$  |          |          |          |          |          |
| 38       88       138         39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |          |          |          | <u> </u>     | <u></u>      |                  |          |          |          | $oxed{oxed}$ |            |        |       |          |          |                 |          |          |          |          |                         |     |              | L        | I                 |          |          |               |   |          |          |          |          |          |          |
| 39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |          |          |          | $\perp$      |              |                  |          |          | L        | Ш            |            |        |       |          |          |                 |          |          |          |          |                         |     | ] .          | L        | I                 |          |          |               |   |          |          |          |          |          |          |
| 100  |          |          |          |              |              |                  |          |          |          | $\square$    |            |        |       |          | $\Box$   |                 |          |          | $\Box$   | $\Box$   |                         |     | ] -          |          |                   | 138      |          | $oxed{\bot}$  | $oldsymbol{ol}}}}}}}}}}}}}} $ |          |          |          | $\Box$   |          |          |
| 41     91       42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     99  |          |          |          |              |              |                  |          |          |          |              |            |        |       |          |          |                 |          |          | $\Box$   |          | $\Box$                  |     | ]            |          |                   |          | $\Box$   | $\Box \Gamma$ | $\Box$  |          |          |          |          |          |          |
| 42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     99  |          |          |          |              |              |                  |          |          | Ĺ        |              |            | 5.1    |       |          |          |                 |          | J        |          | $\Box$   | $\Box$                  |     | ]            |          |                   |          |          | $_{ m I}$     | $\prod$   | $\Box$   |          |          |          |          |          |
| 42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     99  |          |          |          |              |              |                  |          |          |          |              |            |        |       |          |          |                 | ╝        | $\Box$   | $\Box$   | $\Box$   | $\Box$                  |     |              |          |                   |          | $\Box$   | $oxed{T}$     | floor   | $\int$   | J        | $\Box$   |          |          |          |
| 43     93       44     94       45     95       46     96       47     97       48     98       49     99  |          |          | L        | L            | L            |                  |          |          |          |              |            |        |       |          |          |                 | $\Box$   |          |          | _T       | _T                      |     | ٦.           | Т        |                   | 142      |          |               |   | T        | $\Box$   |          |          |          |          |
| 44     94       45     95       46     96       47     97       48     98       49     99  |          |          |          |              | Ľ            |                  |          |          |          |              |            | 775    |       |          |          |                 | J        |          |          |          |                         |     | _            | _        |                   | 143      |          |               | _   |          |          |          | $\Box$   | ╗        |          |
| 45     95       46     96       47     97       48     98       49     99  |          |          |          | Ĺ            | L            |                  |          |          |          |              |            |        |       |          |          |                 | ┚        |          |          |          | $oldsymbol{\mathbb{T}}$ |     | 1.5          | Γ        |                   | 144      |          | $\Box$        |   | $\int$   |          |          |          |          |          |
| 46     96       47     97       48     98       49     149   |          | 45       |          | L            |              |                  |          |          |          |              |            |        |       |          |          |                 |          |          |          |          | ⋾                       |     | ] .          | .: [T    |                   | 145      |          | $\Box \Gamma$ | T   |          | ╗        | 一        |          | $\Box$   |          |
| 47     97       48     98       49     99  |          | 46       |          |              |              |                  |          |          |          |              |            |        |       | 96       |          |                 | $\Box$   |          |          |          |                         |     | 1.           | Τ        |                   | 146      |          | $\top$        | $\top$  | 7        | $\dashv$ | 一        | $\neg$ 1 | $\neg$   |          |
| 48 98 148 149 99 1449 149 149 149 149 149 149 149  |          | 47       |          |              |              |                  |          |          |          |              |            | 1      |       | 97       |          |                 | $\Box$   | $\Box$   | $\Box$   |          | $\neg$                  | 1   | ] -          | Γ        |                   | 147      |          |               | $\top$  |          |          | $\neg$   |          | $\neg$   |          |
| 49 99 149  |          |          |          |              |              |                  |          |          |          |              |            | 1      |       |          |          |                 |          | 丁        |          |          |                         |     |              | Γ        |                   | 148      |          | $\neg$        | $\top$  | 7        | $\dashv$ | $\neg$   | $\neg$   | $\neg$   | $\neg$   |
| \```\#\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   |          | 49       |          |              |              |                  |          |          |          |              |            |        |       | 99       |          |                 | 丁        |          |          |          |                         | T   | ].           | Γ        | 1                 | 149      |          |               | $\neg$  |          | $\neg$   | $\dashv$ | $\neg$   | $\neg$   | $\neg$   |
| <u> </u>   |          | 50       |          | L            |              |                  |          |          |          |              |            | - 2    |       | 100      |          |                 |          |          |          |          |                         |     | ].           | Γ        |                   | 150      |          |               |   |          |          |          |          | $\neg$   |          |